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|  |             |                      |                         |                  |
|--|-------------|----------------------|-------------------------|------------------|
| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.     | CONFIRMATION NO. |
| 10/760,532   | 01/21/2004  | Kari Pajukoski       | 60091.00268             | 1090             |
| 32294 7590 01/18/2007<br>SQUIRE, SANDERS & DEMPSEY L.L.P.<br>14TH FLOOR<br>8000 TOWERS CRESCENT<br>TYSONS CORNER, VA 22182 |             |                      | EXAMINER<br>PHU, SANH D |                  |
|  |             |                      | ART UNIT<br>2618        | PAPER NUMBER     |
| SHORTENED STATUTORY PERIOD OF RESPONSE   |             |                      | MAIL DATE               | DELIVERY MODE    |
| 3 MONTHS   |             |                      | 01/18/2007              | PAPER            |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/760,532

Applicant(s)

PAJUKOSKI ET AL.

Examiner

Sanh D. Phu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 1-6,8,9,12-14,16,17 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7,10,11,15,18 and 20-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. This Office Action is responsive to the election/restriction filed on 11/16/2006, the applicant elected claims 7, 10, 11, 15, 18 and 20-23.

#### *Information Disclosure Statement*

2. The IDS filed 6/14/2005 has been considered and recorded in the file, the IDS filed 1/21/2004 has been received and recorded in the file, however, the foreign patent documents and non-patent literature documents have not been considered because of the published date of the document is not provided from applicant.

#### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 7, 10, 11, 15, 18 and 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Backman et al (US 6,128,355) in view of Tirola et al (US 2001/0017883).

Regarding to claims 7 and 18, Backman et al disclose that a multi-user receiver, which uses at least two antenna elements (10,12)(Fig. 3) and in the base station (A1, A2, A3)(see Fig. 1), an influence of interference is reduced, the multi-user receiver comprising:

a branch with a whitening arrangement (IRC)(see Fig. 3 and 4), another branch without a whitening arrangement (MRC) and a switching means (102)(Fig. 4) for conveying received signals to the branch with the whitening arrangement or to the another branch without the whitening arrangement (see Fig. 3 and 4); and

a receiving means for performing multi-path combining and multi-antenna combining (see Fig. 2, 3 and 4).

Backman et al does not disclose about depending on data rate.

Tirola et al disclose the data transmission speeds correlate to MRC and IRC (see section [0099]).

Therefore, it would have been obvious for one skilled in the art at the time of the invention was made to implement Backman et al 's the IRC, as taught by Tirola et al, with the data part 274B (in Fig. 2C of Tirola et al), so that IRC is used when the data rate is high and the interference is color, MRC is used when the data rate is low.

Regarding to claim 10, Tirola et al disclose the multi-user receiver wherein the whitening is carried out in the whitening arrangement by complex matrix multiplication (see section [0068], [0081]).

Regarding to claim 11, Backman et al disclose the multi-user receiver wherein the receiving means for performing the multi-path combining and the multi-antenna combining comprises a maximum ratio combiner (see Fig. 2, 3 and 4).

Regarding to claim 15, Tirola et al disclose the multi-user receiver wherein the multi-user receiver further comprises determining means for determining the predetermined users from whom the whitening is removed based on a bit rate threshold (see sections [0072],[0073] and [0080]).

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Regarding to claim 20, claim 20 is rejected with similar reasons as set forth in claim 7.

Regarding to claim 21, claim 21 is rejected with similar reasons as set forth in claim 10.

Regarding to claim 22, claim 22 is rejected with similar reasons as set forth in claim 11.

Regarding to claim 23, claim 23 is rejected with similar reason as set forth in claim 15.

### *Conclusion*

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanh D. Phu whose telephone number is (571)272-7857. The examiner can normally be reached on M-Th from 7:00-17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on (571) 272-

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4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sanh D. Phu  
Examiner  
Division 2618

SP

1/7/07

SANH D. PHU  
PATENT EXAMINER

